

PATENT ABSTRACTS OF JAPAN

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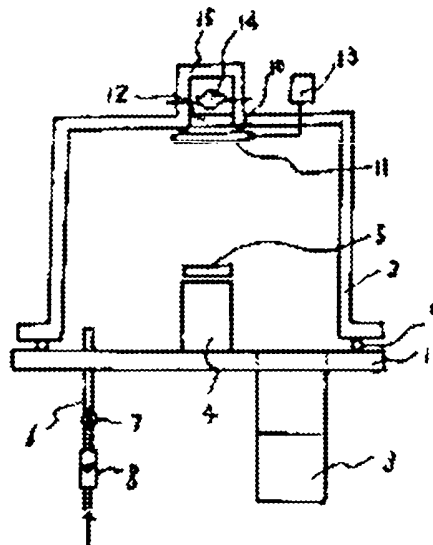
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(54) ATOMIC LAYER EPITAXIAL DEVICE

(57)Abstract:

PURPOSE: To permit a rapid epitaxial growth at low temperature by providing a lamp which illuminates the specimen surface.

CONSTITUTION: A vacuum vessel is constituted by a base plate 1, bell-jar 2 and a vacuum pump 3. A specimen holder 4 for holding a specimen 5 such as a wafer is disposed in the vacuum vessel. A gaseous compound such as SiCl₄ containing atoms (Si) for the epitaxial growth is introduced into the vacuum vessel through a gas inlet section 6. A lamp section is adapted to illuminate at least the surface of the specimen 5. The lamp section is composed of the constituents such as a light shutter 11, quartz window 12, shutter driving motor 13, mercury lamp 14 and a lamp house 15. According to this arrangement, the epitaxial growth is performed in two steps of adsorption of gas by the base plate and decomposition of the compound by the application of light.



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